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TITLE: ENERGY RECOVERY DEVICE FOR REDUCTION OF VEHICLE SPEED
PUBN-DATE: February 20, 1987

INVENTOR-INFORMATION:

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APPL-NO: JP60179466
APPL-DATE: August 16, 1985

INT-CL (IPC): B60K017/28

US-CL-CURRENT: 180/165

ABSTRACT:

PURPOSE: To enable a vehicle to be smoothly started and accelerated by configuring a device in such a way that, when the vehicle is started and accelerated, not only the engagement and/or disengagement of a clutch but also the engagement of the plural number of synchronizers in a multi-step transmission type PTO output device are controlled, and simultaneously the swash plate tilt angle of a variable displacement pump-motor is also controlled.

CONSTITUTION: A multi-step transmission type PTO output device 3' which is composed of PTO gears 6 and 10 and of synchronizers 9 and 11 and the like, all of which are loosely engaged with the output side of both a main shaft 4 and a counter shaft 5, is integrally provided for a transmission 3 which is connected with the putout shaft of an engine 1 by way of a clutch 2. And a variable displacement pump-motor 16 is connected with a PTO output shaft 8 of the device 3'. Then an accumulator 41 is connected with a high pressure hydraulic circuit 40 of the pump-motor, and an air pressure oil tank 43 is connected with its low pressure hydraulic circuit 42. And the device is controlled by an ECU in such a way that, when the vehicle is accelerated from example, both the clutch 2 and the synchronizer 9 are engaged, and

simultaneously the swash plate tilt angle of the pump-motor 16 is set at the value which corresponds to the change of an accelerator pedal.

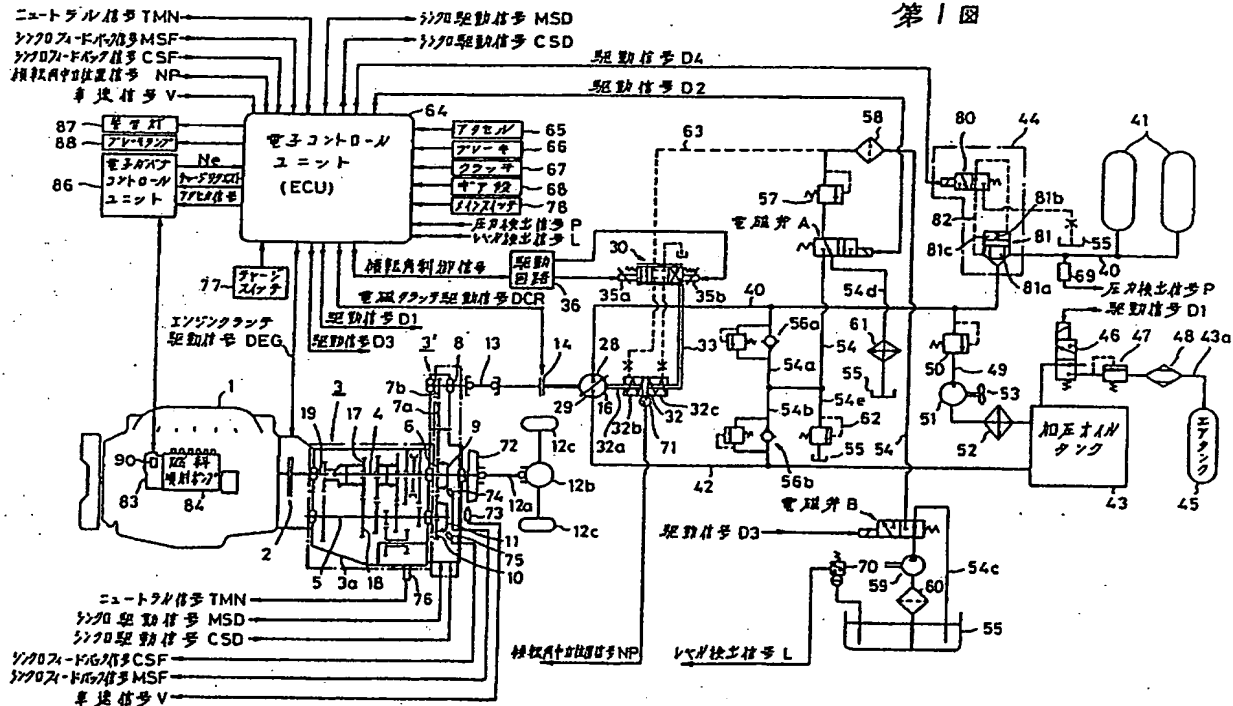
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18…多段の歯車列機構、22…斜板、30…容量制御用電磁弁、32…ピストン、40…高压抽路、41…アキュムレータ、42…低圧抽回路、43…加圧オイルタンク、45…エアタンク、46…加圧エア制御用電磁弁、54…補給抽路、59…オイルポンプ、64…電子コントロールユニット、65…アクセルセンサ、66…ブレーキセンサ、83…電子ガバナ、84…燃料噴射ポンプ、86…電子ガバナコントロールユニット、90…回転数センサ。

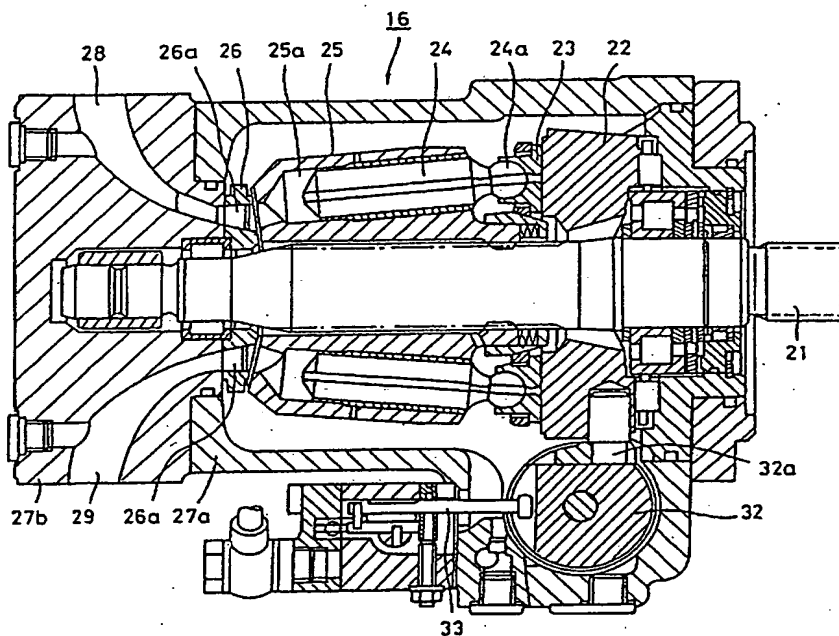
出願人 三菱自動車工業株式会社

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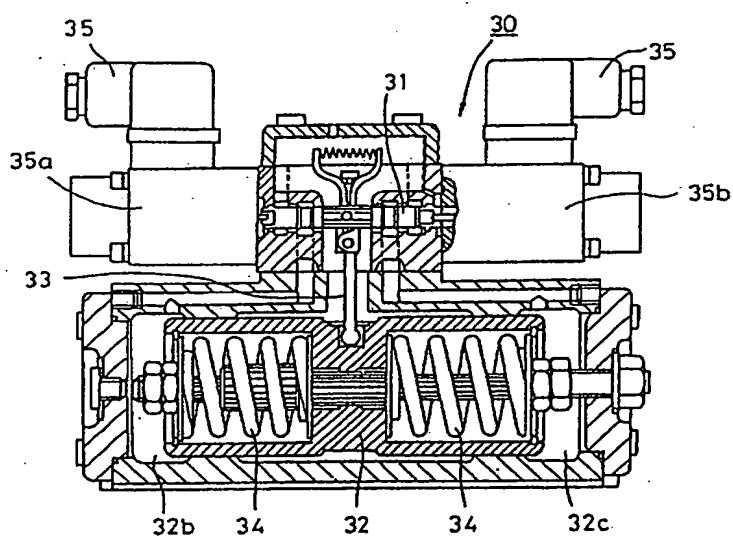
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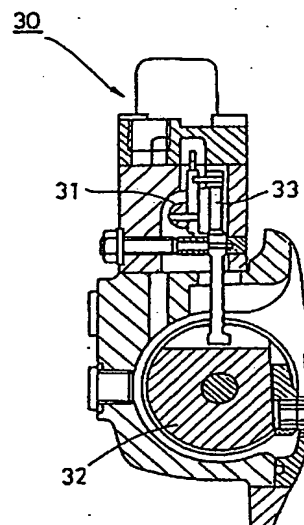
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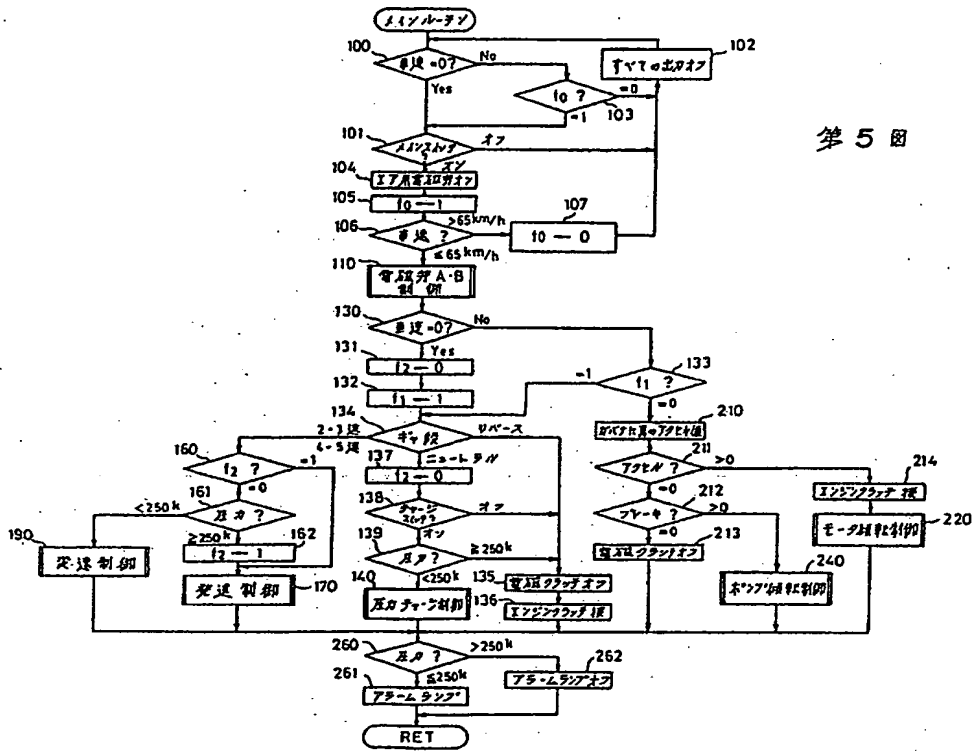
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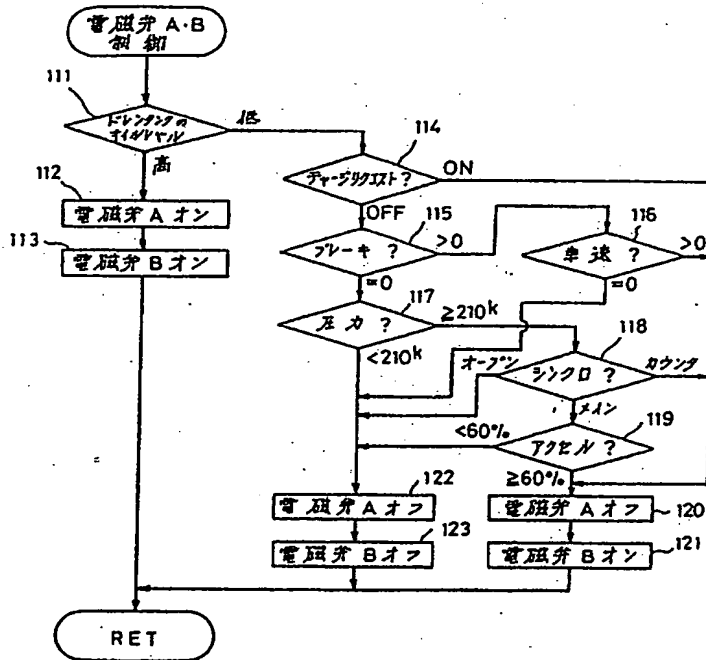
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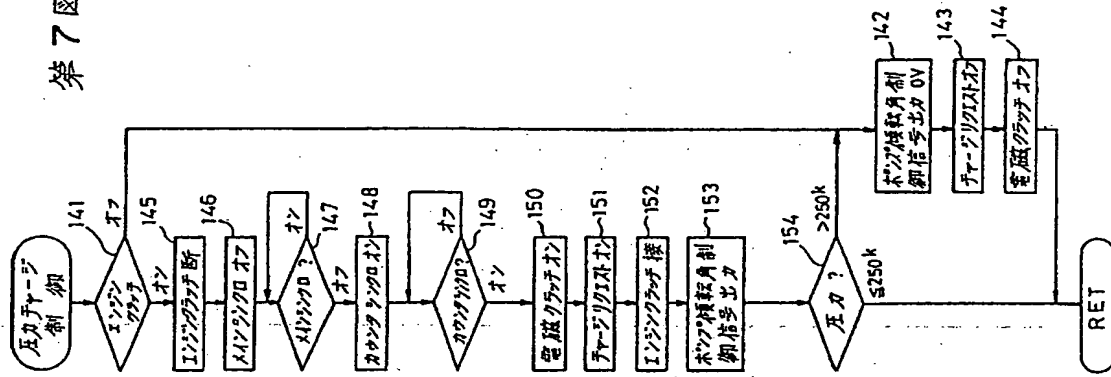
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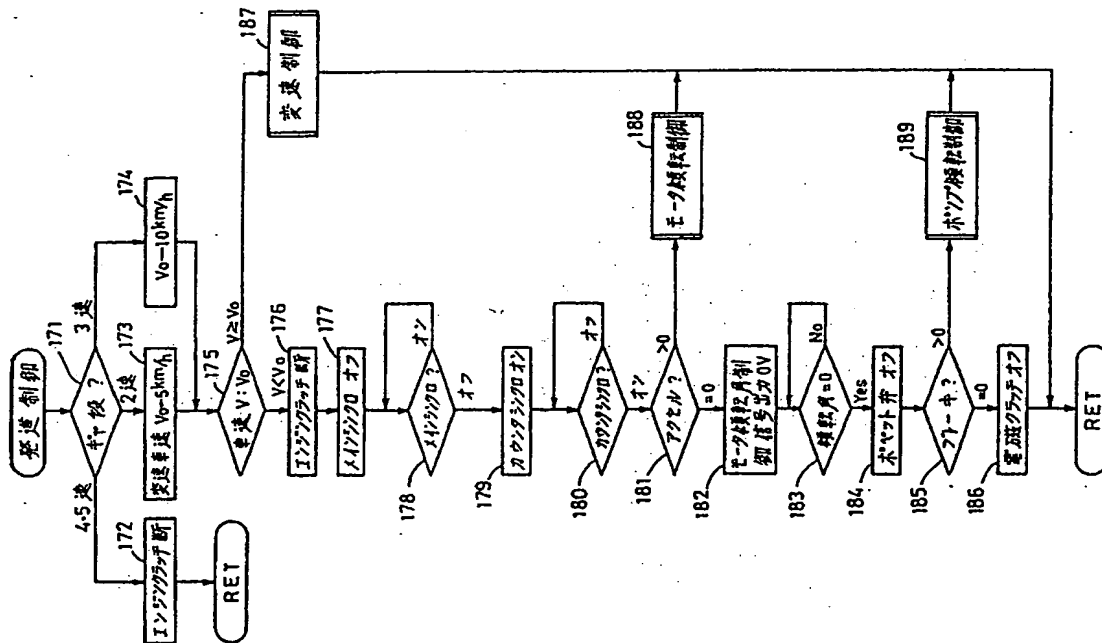
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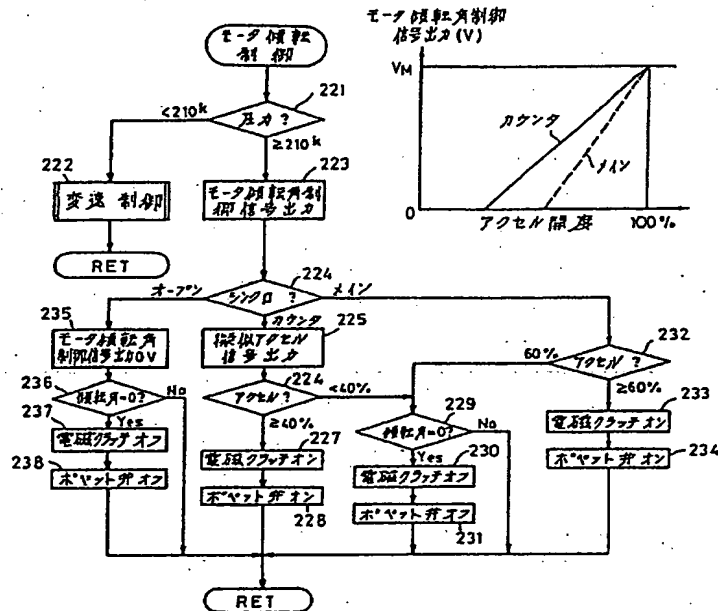


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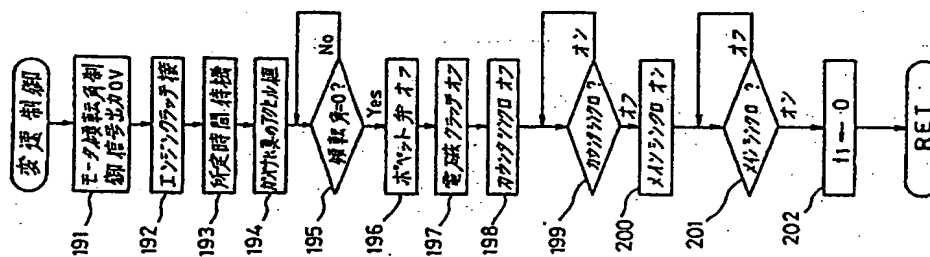


第 9 圖

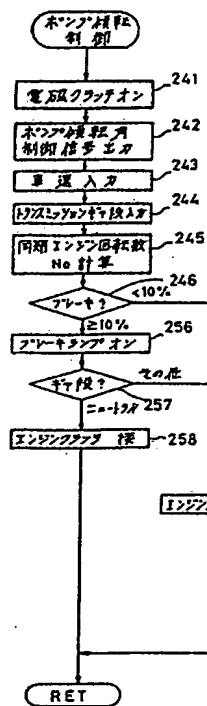
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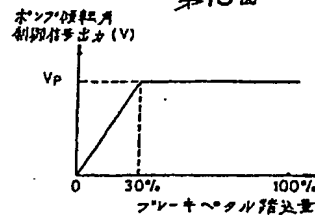
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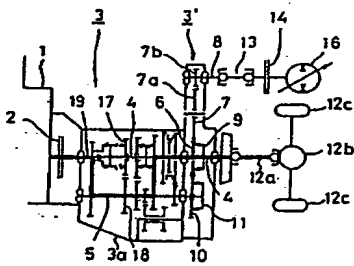
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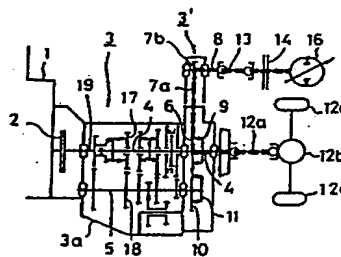
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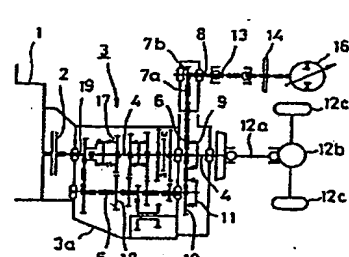
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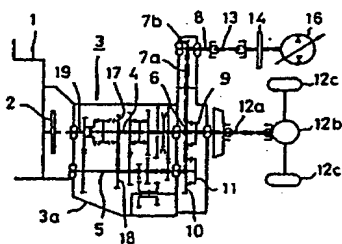
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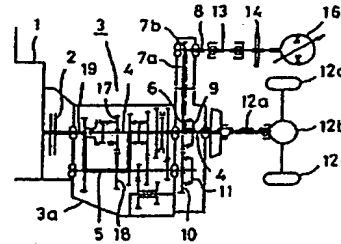
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第17図



第18図



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